



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,536	11/24/2003	Lalita Manchanda	A2550.0113/P113 A	1268
46900	7590	08/08/2006	EXAMINER	
MENDELSON & ASSOCIATES, P.C. 1500 JOHN F. KENNEDY BLVD., SUITE 405 PHILADELPHIA, PA 19102			SCHILLINGER, LAURA M	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/718,536

Applicant(s)

MANCHANDA ET AL.

Examiner

Laura M. Schillinger

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-16, 18, 19, 21 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) 30 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-16, 18, 19, 21, 27-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Newly submitted claims 30-31 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 30-31 pertain to a separate species from that of originally elected claim 13.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 30-31 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 13-19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato ('123).

Kato teaches the following claimed limitations as cited below:

13. A method of fabricating a dielectric material, said method comprising:

Art Unit: 2813

incorporating a Group V element in a Group III metal oxide wherein said dielectric material is deposited in an atmosphere comprising a mixture of oxygen and nitrogen (Col.5, lines: 55-65)

14. A method according to claim 13, wherein said Group III metal oxide is aluminum oxide (Col.5, lines: 55-65).

15. A method according to claim 13, wherein said Group V element is selected from the group consisting of nitrogen and phosphorous (Col.5, lines: 55-65).

16. A method according to claim 14, wherein said Group V element is selected from the group consisting of nitrogen and phosphorous (Col.5, lines: 55-65).

18. A method according to claim 17, wherein said mixture of oxygen and nitrogen has an oxygen-to-nitrogen ratio ranging from 24:6 to 9:21 (Col.5, lines: 55-65, Col.17, lines: 15-35, Col.18, lines: 25-35- various ratios are taught throughout the entire reference).

19. A method according to claim 17, wherein said mixture of oxygen and nitrogen has an oxygen-to-nitrogen ratio of 18:12 (Col.5, lines: 55-65, Col.17, lines: 15-35, Col.18, lines: 25-35- various ratios are taught throughout the entire reference).

21. A method according to claim 13, wherein said dielectric material is formed by a technique selected from the group consisting of reactive sputtering, annealing, atomic layer deposition (ALD), chemical vapor deposition (CVD), metal organic chemical vapor deposition (MOCVD), plasma nitridation, and oxidation of metal nitrides (Col.6, lines: 55-65).

27. (New) A method according to claim 13, comprising forming the dielectric material on a substrate using the oxygen and the nitrogen from said atmosphere (Col.6, lines: 55-65).

28. (New) A method according to claim 16, wherein: said mixture of oxygen and nitrogen has an oxygen-to-nitrogen ratio ranging from about 24:6 to about 9:21 (Col.5, lines: 55-65, Col.17, lines: 15-35, Col.18, lines: 25-35- various ratios are taught throughout the entire reference).; said dielectric material is formed by a technique selected from the group consisting of reactive sputtering, annealing, (ALD), (CVD), (MOCVD), plasma nitridation, and oxidation of metal nitrides; and the method comprises the step of forming the dielectric material on a substrate using the oxygen and the nitrogen from said atmosphere (Col.6, lines: 55-65).

29. (New) A method according to claim 28, wherein said mixture of oxygen and nitrogen has an oxygen-to-nitrogen ratio of about 18:12 (Col.5, lines: 55-65, Col.17, lines: 15-35, Col.18, lines: 25-35- various ratios are taught throughout the entire reference).

***Response to Arguments***

Applicant's arguments with respect to claims 13 and respective dependents have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

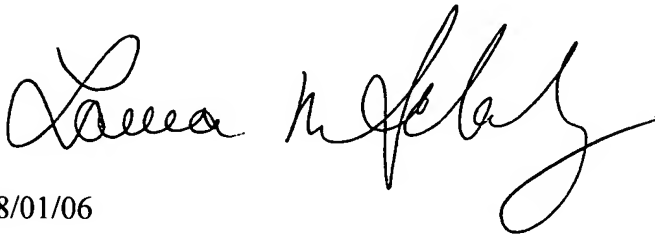
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Laura M Schillinger', written in a cursive style.

Laura M Schillinger  
Primary Examiner  
Art Unit 2813

08/01/06